

## Fully Sealed Container Cermet Potentiometers Military and Professional Grade



P13 potentiometers fully conform to CECC 41301-001 specification. Their excellent performances are due to the use of a cermet-track sealed in a large case.

P13 interchangeability with RV6, combined with the excellent stability of its rated characteristics make it fully acceptable for military and professional uses.

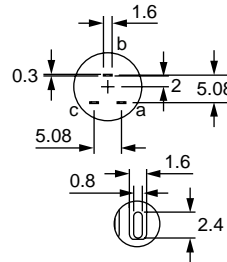
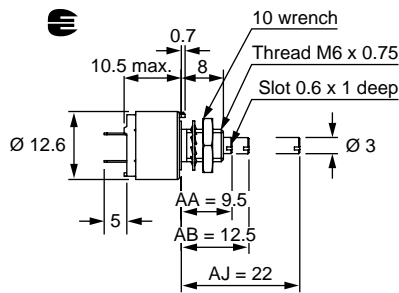
### FEATURES

- High power rating 1.5 W at 70 °C
- CECC 41 301-001 (A, B, C)
- GAM T1
- Fully sealed case
- Tight temperature coefficient ( $\pm 75$  ppm/°C typical)
- Mechanical strength
- Lead (Pb)-free and RoHS compliant since 0501
- Compliant to RoHS directive 2002/95/EC

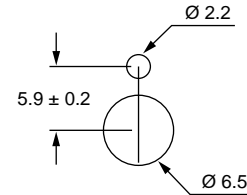


### DIMENSIONS in millimeters ( $\pm 0.5$ )

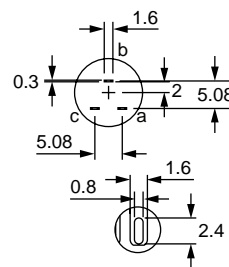
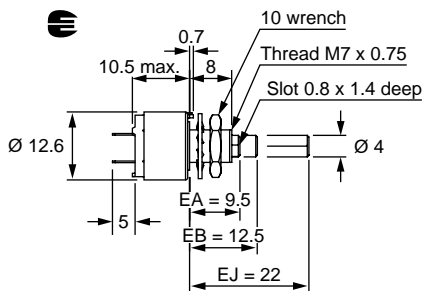
#### P13T-(PC32) A



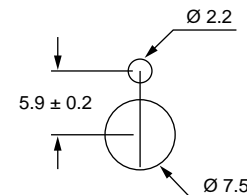
#### Panel Cutout



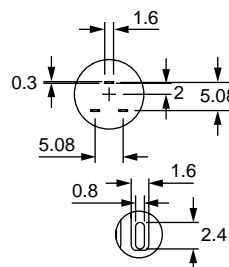
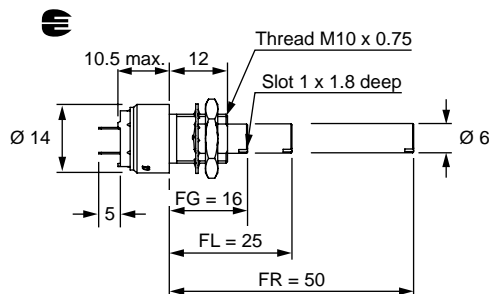
#### P13Q-B



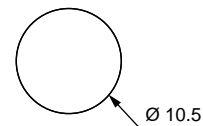
#### Panel Cutout




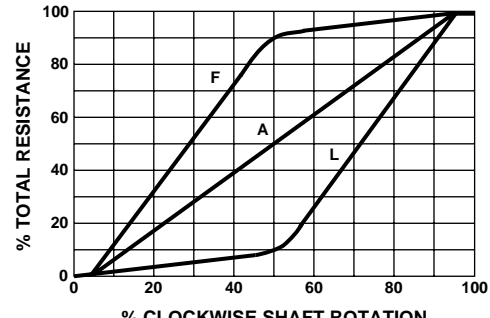
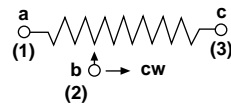
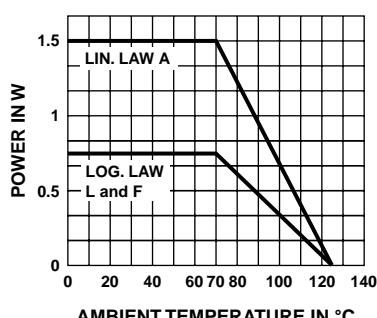
#### P13V-(PC33) C



#### Panel Cutout



 Undergoes European Quality Insurance System

<b>ELECTRICAL SPECIFICATIONS</b>		
Resistive Element	Cermet	
Electrical Travel	270° ± 10°	
Resistance Range	Linear Law	22 Ω to 10 MΩ
	Logarithmic Laws	1 kΩ to 2.2 MΩ
Standard Series E3	1, 2.2, 4.7 and on request 1, 2, 5	
Tolerance	Standard	± 20 %
	On Request	± 10 % to ± 5 %
Variation Law		
Circuit Diagram		
Power Rating	<p>Linear 1.5 W at 70 °C</p> <p>Logarithmic 0.75 W at 70 °C</p> 	
Temperature Coefficient (Typical)	<p>± 150 ppm/°C</p> <p>For values ≥ 100 Ω and in temperature range + 20 °C to + 70 °C, the typical temperature coefficient is ± 75 ppm/°C</p>	
Limiting Element Voltage (Linear Law)	350 V	
Contact Resistance Variation	3 % R <sub>n</sub> or 3 Ω	
End Resistance (Typical)	1 Ω	
Dielectric Strength (RMS)	2000 V	
Insulation Resistance (300 VDC)	10 <sup>6</sup> MΩ	
Independent Linearity (Typical)	± 5 %	

Fully Sealed Container Cermet Potentiometers  
Military and Professional Grade

STANDARD RESISTANCE ELEMENT DATA							
STANDARD RESISTANCE VALUES	LINEAR LAW			LOGS LAW			TYPICAL TCR - 55 °C + 125 °C
	MAX. POWER AT 70 °C	MAX. WORKING VOLTAGE	MAX. CUR. THROUGH WIPER	MAX. POWER AT 70 °C	MAX. WORKING VOLTAGE	MAX. CUR. THROUGH WIPER	
Ω	W	V	mA	W	V	mA	ppm/°C
22	1.5	5.74	261				± 150
47	1.5	8.4	177				
100	1.5	12.2	122				
220	1.5	18.2	82.6				
470	1.5	26.5	56.5				
1K	1.5	38.7	38.7	0.75	27	27	
2.2K	1.5	57.5	26.1	0.75	40	18	
4.7K	1.5	84	17.9	0.75	59	12	
10K	1.5	122.5	12.2	0.75	87	8.7	
22K	1.5	182	8.26	0.75	128	5.8	
47K	1.5	265	5.65	0.75	187	3.9	
100K	1.22	350	3.5	0.75	273	2.7	
220K	0.56	350	1.6	0.56	350	1.6	
470K	0.26	350	0.74	0.26	350	0.74	
1M	0.12	350	0.35	0.12	350	0.35	
2.2M	0.05	350	0.16	0.05	350	0.16	
4.7M	0.026	350	0.074				
10M	0.012	350	0.035				

MECHANICAL SPECIFICATIONS		
Mechanical Travel	300° ± 5°	
Operating Torque (Typical)	2 Ncm max.	2.85 oz. inch max.
End Stop Torque		
Style T, Q	35 Ncm max.	3.1 lb inch max.
Style V	80 Ncm max.	7.1 lb inch max.
Tightening Torque of Mounting Nut		
Style T, Q	150 Ncm max.	13.3 lb inch max.
Style V	250 Ncm max.	22.1 lb inch max.
Unit Weight	6 g to 18 g max.	0.22 oz. to 0.64 oz.
Terminals	e3: pure Sn	

ENVIRONMENTAL SPECIFICATIONS	
Temperature Range	- 55 °C to 125 °C
Climatic Category	55/100/56
Sealing	Fully sealed - Container IP67